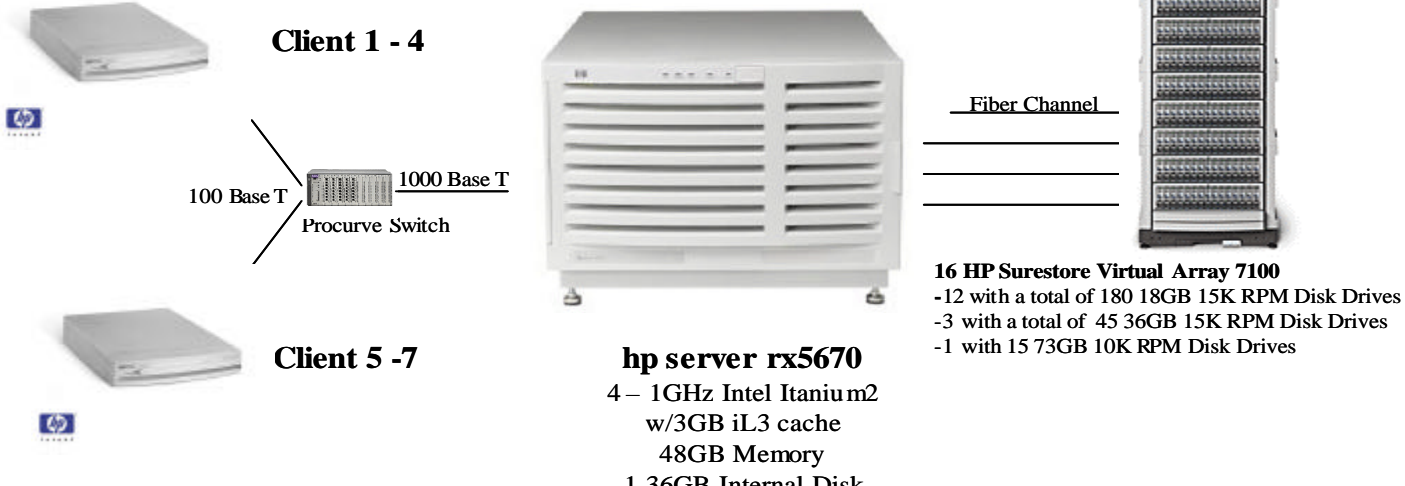
	hp server rx5670			TPC-C Revision 5
				Report Date: November 13, 2002
Total System Cost	TPC Throughput	Price/Performance		Availability Date
\$1,068,647	80,570.81 tpmC	\$13.26/tpmC		May 11, 2003 Hardware available now
Processors	Database Manager	Operating System	Other Software	Number of Users
4 Intel Itanium2 1GHz	Oracle10i Database Standard Edition	HP-UX 11.i, v1.6 with Performance Pack, 64-bit	TUXEDO 8.0	64,800

Server



Client 1 - 4

100 Base T Procurve Switch

Client 5 - 7

hp server rx5670
4 – 1GHz Intel Itanium2
w/3GB iL3 cache
48GB Memory
1 36GB Internal Disk

16 HP Surestore Virtual Array 7100
-12 with a total of 180 18GB 15K RPM Disk Drives
-3 with a total of 45 36GB 15K RPM Disk Drives
-1 with 15 73GB 10K RPM Disk Drives

Clients – 7 hp rp2470 servers

<i>System Components</i>	<i>Server (hp server rx5670)</i>		<i>each Client (7 hp server rp2470)</i>	
	<i>Qty</i>	<i>Type</i>	<i>Qty</i>	<i>Type</i>
Processors	4	1GHz Intel Itanium2	1	750MHz PA-RISC 8700
Cache Memory	each	3MB L3 cache	each	.75MB I-cache/1.5 MB D-cache
Memory	48	GB	1	3 GB
Disk Controllers	4	2GB Fibre Channel Adapter	1	Ultra2 SCSI LVD
Disk Drives	16	Surestore Virtual Array 7100, 12 with a total of 180 15K RPM Disks, 3 with a total of 45 36GB 15K RPM Disks and 1 with 15 73GB 10K RPM Disks	1	18 GB
Total Storage	2732.56	GB		
Tape Drives	1	DVD ROM		
Terminals	1	Console Terminal	1	Console Terminal



hp server rx5670

TPC-C Rev 5

Report Date: November 13, 2002

Description	Part Number	Brand	Price Key	US List Price	Qty	Price	3Year Main.Price
Server Hardware							
hp server rx5670 with 1GHZ processor	A6838A		1	26,494	1	26,494	7,052
1GHz Processor with 3MB Cache	A6836A		1	8,250	3	24,750	3,459
4GB PC2100 DDR-SDRAM Memory quad	A6834A		1	8,000	12	96,000	
Memory Carrier Board	A6747A		1	1,981	2	3,962	
36GB 10K Internal Drive	A7048A		1	587	1	587	
DVD ROM	A5557B		1	450	1	450	
Syستم Console	C1099A		1	550	1	550	
HP-UX Operating Environment	B0916A, Opt AFF		1	520	1	520	
HP-UX 11i, v1.6 Performance Pack Per-Processor Licens	B9429AC		1	2,495	4	9,980	
2GB Fibre Channel Adapter	A6795A		1	2,240	4	8,960	
PowerTrust 3.0VA UPS 230VUPS	A1353A		1	1,735	8	13,880	
Surestore VA 7100 w/dual controllers 512MB cache	A6262A		1	44,250	16	708,000	58,784
18GB 15K RPM FC HDD	A6191A, Opt. 0D1		1	914	180	164,520	
36GB 15K RPM FC HDD.	A6193A, Opt 0D1		1	1,349	45	60,705	
73GB 10K RPM FC HDD.	A6194A, Opt 0D1		1	2,019	15	30,285	
2 meter LC/SC Fibre Optic Cable	C7529A		1	215	20	4,300	
HP FC 1GB/2GB Entry Switch 8B, Field Rack	A7346A		1	6,599	4	26,396	
HP9000 Std. Rack System E41	A4902A		1	1,910	2	3,820	
Modular Power Dist.	A5137AZ		1	145	8	1,160	
200-240 Volts Power Option	A5137AZ, Opt AW4		1	94	8	752	
Subtotal						1,186,071	69,295
Server Software							
Oracle10i Database Standard Edition							
Processor License for 3 years		Oracle	2	7,500	4	30,000	
Oracle Database Server Support Package for 3 years			2	6,000	1		6,000
Subtotal						30,000	6,000
Client Hardware							
HP server rp2470	A6890A		1	1,865	7	13,055	24,815
750Mhz PA-RISC 8700 CPU	A6892A		1	5,100	7	35,700	
18GB 10K HotPlug Ultra 160 SCSI Internal Disk	A6741A		1	732	7	5,124	
2GB Memory Module	A6114A		1	6,000	7	42,000	
1GB Memory Module	A5841A		1	1,999	7	13,993	
HP-UX 11.i Sys Media, CD-ROM	B3920EA, Opt. AAF		1	520	7	3,640	
Subtotal						113,512	24,815
Client Software							
HP C/ANSI C Compiler	B3901BA, Option AH0		1	1600	1	1,600	170
BEA Tuxedo 8.0		Bea Sys.	3	2,850	7	19,950	13,230
Subtotal						21,550	13,400
User Connectivity							
HP ProCurve Switch 4000M	J4121A		1	2379	1	2,379	588
HP ProCurve Switch 100/1000Base-T Mod.	J4115B		1	509	1	509	
Subtotal						2,888	588
Oracle Mandatory E-Business Discount (license and support)				2	(1,800)	1	(1,800)
HP's Large configuration Discount and Support Prepayment*							(\$387,023)
Total						965,198	103,449
*All discounts are based on US list prices and for similar quantities and configurations							
1=HP 2= Oracle (Pricing Contact: Herve Lejeune(see Appendix F) 3=BEA Systems						Three Year Cost of Ownership: \$1,068,647	
Audited by Lorna Livingtree for Performance Metrics, Inc.						tpmC Rating: 80,571	
						\$/tpmC: \$13.26	

Prices used in TPC benchmarks reflect actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.

Numerical Quantities Summary for hp server rx5670

MQTH, Computed Maximum Qualified Throughput

80,570.81 tpmC

Response Times (in seconds)

	90th %-ile	Maximum	Average
New-Order	1.11s	33.45s	0.61s
Payment	1.10s	33.52s	0.59s
Order-Status	1.12s	32.64s	0.62s
Delivery (interactive portion)	0.61s	32.27s	0.24s
Delivery (deferred portion)	1.11s	32.93s	0.61s
Stock-Level	1.13s	32.67s	0.61s
Menu	0.0001s	0.00125s	0.000004s

Transaction Mix, in percent of total transactions

New-Order	44.96%
Payment	43.01%
Order-Status	4.01%
Delivery	4.002%
Stock-Level	4.01%

Keying/Think Times

	Keying Time			Think Time		
	Min	Avg	Max	Min	Avg	Max
New-Order	18.02s	18.03s	18.18s	0.01s	12.13s	173.27s
Payment	3.01s	3.02s	3.18s	0.01s	12.07s	187.1s
Order-Status	2.01s	2.02s	2.18s	0.01s	10.11s	144.01s
Delivery (interactive)	2.01s	2.02s	2.18s	0.01s	5.05s	67.78s
Stock-Level	2.01s	2.02s	2.18s	0.01s	5.06s	68.44s

Test Duration

Ramp up time	37 minutes
Measurement interval	120 minutes
Transactions during measurement interval	21,503,951
Ramp down time	33.358 minutes

Checkpointing

Number of checkpoints in measurement interval	4
Checkpoint Interval	29.51 minutes